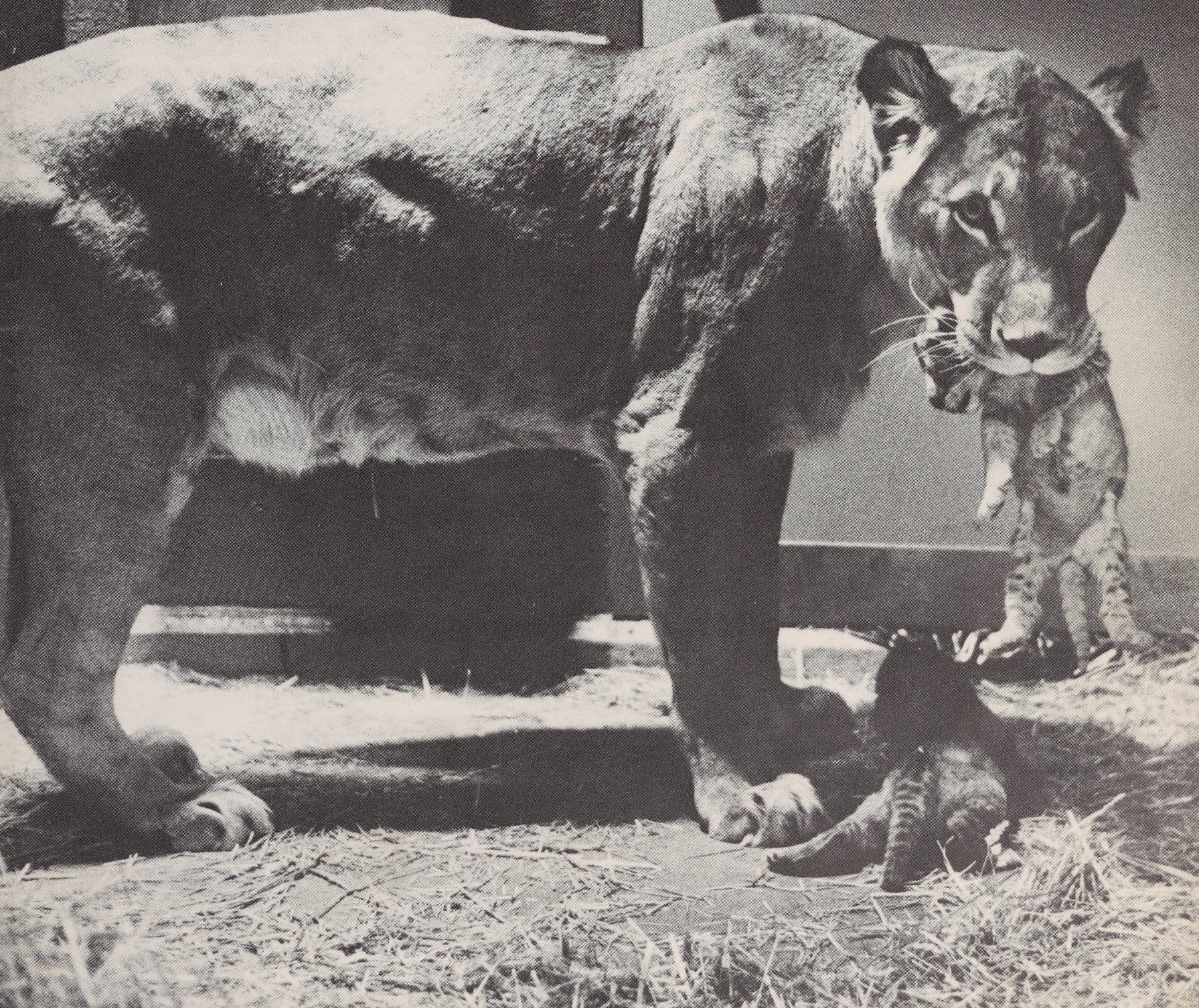


THE ZOO GOER



volume 6, number 1

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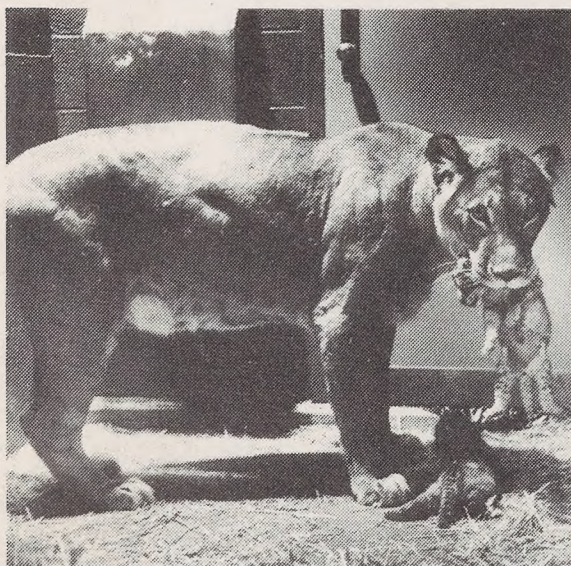
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Front Cover: One cub in mother's mouth and one at her feet represent the first offspring of the Zoo's important program to breed Atlas lions. Never before bred in America, this North African sub-species is extinct in the wild and less than 40 survive in captivity.

Back Cover: The nose not size names the elephant shrew, one of many animals being studied and bred at the Office of Zoological Research.

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Editor's Correction: The FONZ Balance Sheet which appeared in the last issue of *The ZooGoer* was incorrect. Correct figures are available by calling 232-7704.



Zoo Research



Zoo Research

By Dr. Devra Kleiman
Reproduction Zoologist

The Office of Zoological Research was created in 1965 when Dr. John Eisenberg was hired by the National Zoo to be its Resident Scientist. During the early years, Dr. Eisenberg, a secretary, and a keeper were all there was to OZR. Now, 11 years later, OZR occupies half of the modern Hospital/Research Building with 11 staff members and about 15 research associates, post-doctoral fellows, and graduate students, plus an animal collection of its own. The research program at the Zoo is the finest in the country, and it is supported not only by the federal government but by grants from scientific and conservation organizations, including FONZ.

The philosophy of the research unit has always emphasized the conservation of wildlife in nature as well as its preservation in captivity. Thus, OZR staff and students have been involved in

Previous Page: Studying the calls of wolves by converting their sound into visual patterns is one of many research projects carried out by the Zoo's high-powered team of scientists.

A quill-filled tail that grasps like a hand distinguishes the prehensile-tailed porcupine of South America, one of the many rare animals being bred and studied by National Zoo scientists.

studies all over the globe. One of Dr. Eisenberg's first programs was in Madagascar where he not only examined the ecology and behavior of the unique Madagascan insectivores—the tenrecs—but also obtained for the Zoo some rare Madagascan viverrids. Since this first field project, OZR has continued to sponsor field research in places as remote as Sri Lanka (Ceylon), Nepal, Panama, and Venezuela. Species studied have been as diverse as the Asiatic elephant, crab-eating fox, cotton-top tamarin, tiger, spider monkey, sloth, and agouti. The role of each species in the ecosystem is examined—how, when, and where it feeds, moves, reproduces, socializes, and interacts with other living things.

The overall studies of OZR usually arise from basic biological questions. The species composition and ecological roles of mammals in tropical Africa, Asia, and South America, for example, have been studied for years by Dr. Eisenberg. He has found that even though the species composition differs on each continent, the same basic roles or niches in the forest must be filled. Thus, there have evolved mammals on each continent that feed on leaves—langurs of Asia, the howler monkeys and sloths of South America, and the colobus



Keepers in the Office of Zoological Research turn gourmet chefs when preparing the ground meat, insect, sweet potato, egg, kale, and milk that make up the complicated menu for African elephant shrews.

monkeys of Africa. Because of their specialized diet, leaf-eating mammals are some of the hardest species to maintain well in zoos and have been the subject of special study by OZR staff at the National Zoo and in the field. Information gathered from field observations is applied to captive maintenance and breeding programs, which then allow more detailed observations of the finer

points of breeding habits, social behavior, and space utilization.

My special interest is in reproductive and social behavior. Recently, I have been studying monogamy in mammals. Unlike birds, very few mammals maintain long-term pair bonds. Yet monogamy occurs in very diverse groups, such as marmosets and tamarins, canids, small ungulates,

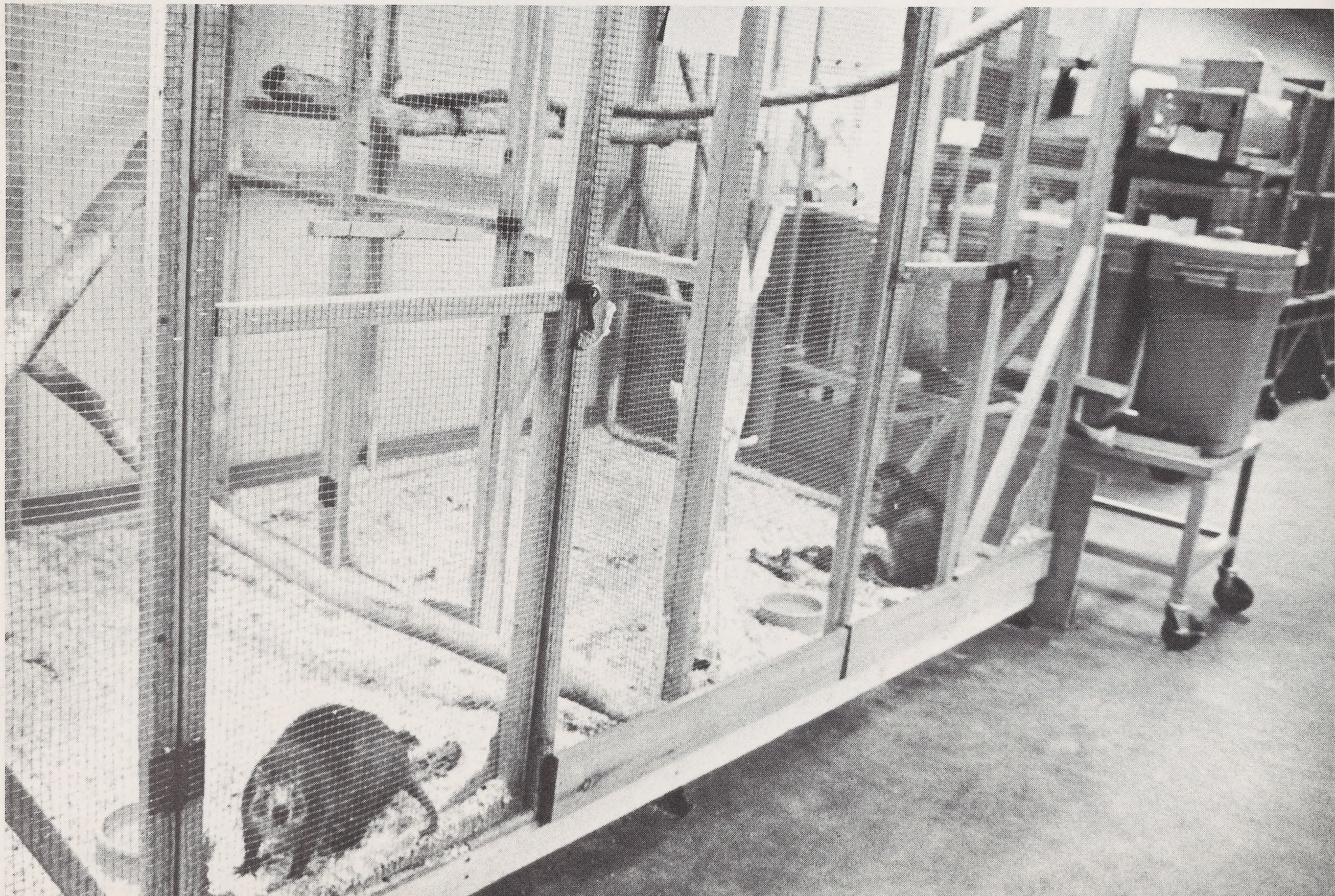
and elephant shrews. Monogamous mammals differ from polygamous mammals. For example, monogamous males and females tend to share responsibilities equally. They scent mark, vocalize, and defend territory with the same frequency. Moreover, the males of some species spend almost as much time as females in child-rearing. Surprisingly though, the members of a pair in monogamous species do not interact very much and often ignore each other for hours.

Our studies have often led us to theorize about the evolution of behavior. For example, comparisons of the calls of widely different birds and mammals revealed that vocalizations which have similar functions and express similar moods are often alike in pitch and structure. Both wrens and howler monkeys use short repetitive sounds to express friendliness and harsh sounds to show hostility. The alarm calls of many animals are also similar. This suggests that there are limits to

the kinds of sounds that will evolve to express certain moods. Dr. Gene Morton has also found that the habitat of a species affects its vocal patterns; this is due to differences in how sound travels under different environmental conditions, e.g., tropical forest, savanna, and desert.

Behavioral evolution can also be studied by comparing primitive and more advanced mammals. For several years, OZR kept small dasyurid marsupials from

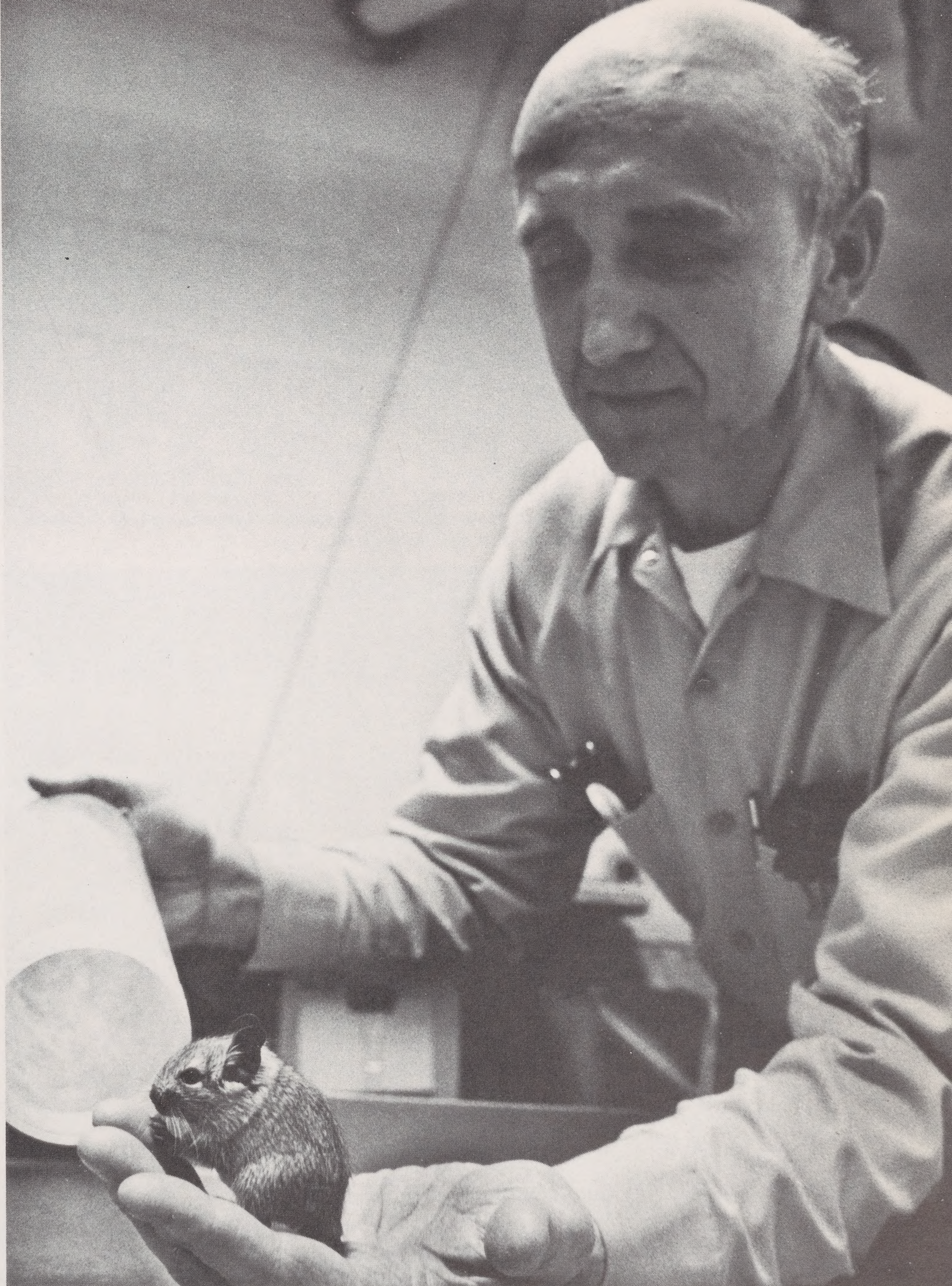
Rare rodents, like these Cuban hutias, have been bred successfully thanks to the special efforts of National Zoo researchers.



Australia, the most primitive of carnivores. Observations of the predatory behavior of the tenrecs, dasyurids, and the more advanced tamarins showed that the methods for catching and eating prey were similar in all three mammalian groups despite their widely different evolutionary history. This research suggests that very different animals find similar solutions to the same problems, probably because there are a limited number of efficient ways to accomplish certain tasks.

Conservation of the ecosystem is a prime concern of OZR. The study of tropical habitats has prompted the OZR staff to make recommendations to host countries about the conservation of species and natural resources. Such recommendations were a major part of a Ceylon research program, especially with respect to the Asiatic elephant. Dr. Gene Morton is currently involved in a project to reintroduce to Barro Colorado Island in Panama several bird species that had disappeared locally. Observations of the nesting and breeding behavior of these birds may help explain why some species become extinct even when not influenced by man.

Palming a young degu, the keeper prepares to give the South American rodent its routine physical to ensure peak health.



Numerous rare and endangered species, such as Branick's giant rat, the Hispaniolian hutia, and the salt desert cavy, have been maintained and bred successfully at OZR. Special effort is being made currently to maintain and breed the very delicate African elephant shrews. The Zoo's golden lion marmoset colony of 28 animals is the largest in the world outside of their native Brazil. Success with the lion marmosets is

a direct result of studies of their social behavior and parental care.

Although based on the hill above Rock Creek, OZR staff members do not have an "ivory tower" mentality. Numerous successful breeding programs in the Zoo itself have been the result of cooperative efforts of OZR, curators, keepers, and FONZ volunteers. The very dramatic success

the Zoo has had in breeding lesser pandas arose from just such cooperation. Successful breeding of the giant pandas will involve many different people and offices, including OZR.

On any given day, OZR staff and students are involved in a variety of activities at the Hospital/Research Building. Strange sounds often permeate the halls as scientists listen to the slowed-down or speeded-up vocalizations of mammals or birds. Even smells change from day to day. One week, the offices reeked of the odor of baked asparagus, but no one was cooking a meal. Dr. Eisenberg was drying out giant panda feces in the oven to determine how much bamboo the pandas digest! Occasionally, the staff will surround a TV screen, not watching Sesame Street, but the activities of an animal recorded with the video tape equipment. And throughout, there is the constant hum of typewriters producing reports of studies for publication. Two of the highlights of recent years have been workshops held at Front Royal which brought together scientists from numerous disciplines to discuss, argue, and exchange knowledge. In OZR, communicating with other scientists and the public is as important as doing a study itself.

A biotechnician readies fragments of tropical leaves for microscopic analysis as part of a Zoo study on the food habits of leaf-eaters such as sloths and monkeys.



Desert Fox Comes to Zoo

By Harold Egoscue
Mammalogist

German General Rommel was so at home in the Sahara that soldiers called him "the desert fox."

The remarkable animal that probably inspired that nickname is now on exhibit in the Nocturnal Room of the Small Mammal Building.

Few animals are better suited for a hot, dry, and near waterless homeland than the tiny desert fox, or fennec (*Fennecus zerda*), which lives in the driest parts of North Africa, Sinai, and portions of the Arabian Peninsula.

Adult fennecs are about 20 inches long, including the tail. They stand six to eight inches high at the shoulder and weigh two to three pounds. By comparison, the kit fox, smallest North American canid, is about 12 inches high and weighs twice as much. Fennecs have enormous ears, abruptly pointed faces, large dark eyes, and a bushy, dark-tipped tail that is half the length of the head and body.

Newest resident of the Zoo's Nocturnal Room in the Small Mammal Building is the fennec or "desert fox" of North Africa.





Their sandy-colored coat blends in with the desert landscape.

Fennecs are omnivorous. Diet in the wild includes small rodents, such as gerbils and jerboas, lizards, insects, eggs, small birds, and large amounts of grass, roots, and fruits. Their huge ears and large eyes help them detect lizards, rodents, and insects. Although fennecs will drink water when it is available, they can subsist without it and often live far from permanent water sources. Most of their liquid needs are apparently satisfied by the moisture in their food.

Fennecs are popular as pets and are a long-time favorite zoo animal, yet little is known about them in the wild beyond the most obvious facts of life in arid places. Fennecs are active after sundown and, like most desert animals, avoid the drying heat of midday asleep in their deep burrows. Favorite locations for dens are sparsely vegetated, stabilized sand dunes, where the soil is loose enough for easy digging but is given support by plant roots. The burrows extend deep below ground and have several

Enormous ears for detecting insect meals and a sandy coat that matches its Sahara home help the fennec fox survive in a hostile desert environment.

entrances. Dens adjacent to each other are often joined by inter-connecting tunnels. Fennecs are the only foxes known to line the main chamber with dry vegetation. They apparently are more sociable than most small canids, and more than one fennec may occupy a den system.

Pairs are still the basic social unit, however, and there is some indication that pairs mate for life. In captivity, a female will seldom rear cubs unless her mate is nearby. Under natural conditions, fennecs breed in mid-winter and give birth to one to five pups in March or April.

Although not trapped for their fur, fennec pups are reportedly caught by hunters, fattened, and sold for food.

Bicentennial Baby Elephant Arrives

By Bill Xanten
Curator of Mammals

A baby elephant—the first in 17 years—has come to the National Zoo. The year-old Asian pachyderm arrived December 30, 1976, as a Bicentennial gift from the children of Sri Lanka (Ceylon). Her name is Shanthi, which means “peace” in Senegalese.

Shanthi came with her “baby-sitter,” Mr. Samaranayake, chief ranger of the Sri Lanka Game Department. “Sam,” as we call him, had raised and cared for Shanthi almost from birth. His expertise was important to keep the infant happy and healthy while she adjusted to a new home.

Like human babies, Shanthi drinks milk. Unlike human babies, she consumes six gallons a day plus three gallons of rice gruel! The perfect-size baby bottle turned out to be a magnum champagne bottle.

The transition from the diet fed in Sri Lanka to an Americanized formula took about two weeks. It was decided, based on extensive

discussions with other zoos, to use Enfamil, a human infant milk replacer, plus brown rice and raw sugar. The Zoo Commissary spent considerable time and effort tracking down suppliers.

Another challenge was helping Shanthi adjust to her new environment—the strange grunts, snorts, and banging coming from the other residents of the Elephant House and the new faces of our own keepers caused the baby a great deal of anxiety. Sam himself proved the best security blanket of all. During the first few weeks, he slept next to the enclosure so that he would always be near. Our own keepers shared this around-the-clock vigil.

Since Sam spoke little English, it was often necessary for his Embassy to send over a translator so that we could question him about proper care.

Elephants in Sri Lanka, as in other parts of Asia and in Africa, are losing more and more of their habitat. Forests are felled for lumber, wilderness cleared for farms, roads, and homes. Fortunately, Sri Lanka has set aside wildlife sanctuaries. But when elephants roam outside the protected areas, they are frequently shot by poachers or by farmers protecting their crops.

The Game Department has set up an orphanage to care for baby mammals, including elephants, whose mothers have died of natural causes or been killed by man. At times there have been as many as 21 elephants under care. Nearly all are sent to zoos around the world.

Shanthi was rescued at the age of two weeks, making her the youngest elephant ever to enter

the care center. She was found in a deep hole, and her trunk had been severely injured. She was near death when brought to the orphanage. The results of the care and interest shown by the Game Department are typified by Shanthi, who today is healthy and active.

Eventually, the Zoo plans to put Shanthi with its other Asian elephant, "Ambika." Short introduc-

tions have been taking place and are encouraging. At first, full-grown Ambika appeared frightened of the small creature who kept trying to touch her and nuzzle underneath to nurse. But each encounter has proved easier and calmer for both.

There is nothing more fun to see than a healthy, growing, and playful baby elephant as Washingtonians can now discover.

Shanthi, the Zoo's baby elephant, is fed round-the-clock, consuming 27 big bottles of milk and 14 of rice gruel.





Pygmy
Hippopot

Pygmy Hippos

By J. Fisher

Pygmy hippos have figures like bloated gumdrops and faces that would stop the glockenspiel. Yet the creatures have been showered with tender loving care at the National Zoological Park.

The animals have responded by showing their own kind of love and affection. An extraordinarily successful breeding program at the Zoo has produced 51 pygmy hippos since 1929. The newest arrival, Tiai, a tubby little girl, was born last November, bringing to eight now in residence.

The accomplishment hasn't gone unnoticed. The American Association of Zoological Parks and Aquariums recently awarded the National Zoo its coveted Sustained Breeding Award for the outstanding hippo program.

"We've farmed out many of our pygmy hippos to other zoos through the years, and they've started breeding programs of their own," explains William Z. Xanten, Jr., the Zoo's curator of mammals. "As a result, there's a

Previous Page: Baby pygmy hippos are a common sight at the National Zoo thanks to a remarkably successful breeding program.

kind of mini-population explosion going on. We still intend to breed the pygmies, but not to the same extent as in the past."

Although common in captivity, the miniature hippos are far scarcer in the wild than their normal outsized relatives who thrive in East Africa. A few pygmy hippos can still be found in Liberia. Others occasionally turn up in Sierra Leone and the Ivory Coast.

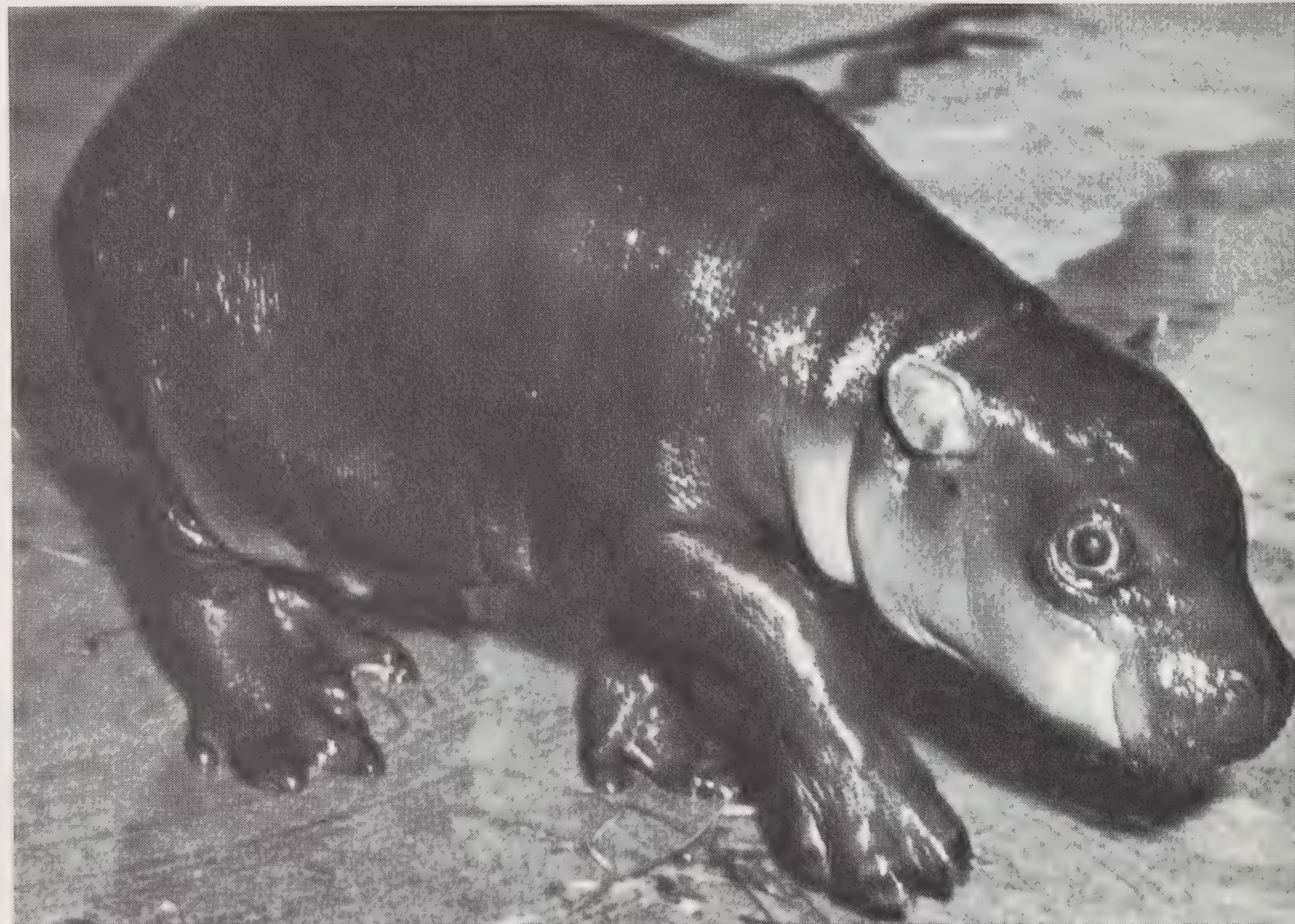
The Zoo owes a special debt to Liberia. The breeding program was temporarily stalled in 1955 after the last male hippo died. But in 1960, the late president of Liberia, William V. S. Tubman, graciously donated an animal to

the Zoo from his private wildlife collection.

The hippo, named Totota, traveled in style on a freighter to the U.S. He was given full run of a shower room next to his keeper's stateroom. All this luxury must have gone to Totota's head, because he charged the fixtures and had to be confined to the shower stall. Gourmet meals of sweet potatoes, cabbages, and bread made up for the close quarters, and Totota arrived fit and contented.

Facing Page: Although increasingly threatened in the wild, hippos staged a breeding boom at the National Zoo.

Wide-eyed in a new world, Gumdrops VIII is one of more than 50 pygmy hippos born at the Zoo since 1929.







Totota, like all the Zoo's pygmy hippos, received a private cage. Unlike their more numerous big cousins who gather in herds of 20 or 30, pygmys are solitary creatures. In the wild, they prefer to go it alone.

Nocturnal animals, they prowl the darkness along fixed paths through the underbrush in search of vegetables, tender shoots, leaves, roots, and fallen fruits.

They are good swimmers but far less aquatic than their big relatives and, if pursued, often head for the underbrush instead of the nearest pond or riverbed.

In contrast, the big hippos in East Africa spend most of the day in the water. Occasionally they submerge completely, rising every three to four minutes for a breath of air. They may nibble a little on water plants in the shallows, but during the day they are not serious eaters. Only at night do they move onto land, sometimes wandering several miles in search of a meal that may include 150 pounds of grass per adult. That sometimes proves their undoing, for the huge creatures make easy targets for an irate farmer.

Presented to the National Zoo in 1960 by the President of Liberia, Totota opens wide for his portrait. He played a key role in helping the Zoo win the Sustained Breeding Award in 1976 for its outstanding pygmy hippo program.



BOOK NEWS

The Swamp

by Bill Thomas; W.W. Norton & Co., Inc., 1976, 223 pp. \$24.95

Say "swamp" and many people think of mosquitoes, dank water, and snakes. Avoid it if you can. If you can't, destroy it to make way for houses or highways.

Bill Thomas' new and stunningly handsome book, *The Swamp*, is dramatic proof of just how wrong that traditional attitude is.

In 223 pages glowing with more than 300 color photographs, author-naturalist Thomas evokes the beauty and the bounty of America's last wilderness frontier.

Typically, swamps teem with an astonishing diversity of wildlife—furred and feathered. Almost within sight of Times Square, white-tailed deer browse in The Great Swamp of New Jersey. Otters gambol in South Carolina's Four Holes Swamp. The endangered Florida sandhill crane nests in Georgia's Okefenokee

Spreading its wings to dry in the Florida Everglades, the snake bird, or water turkey, is part of the teeming wildlife found in swamps throughout the United States.

Swamp. Alligators, black bear, bobcat, Florida panther, and hundreds of wading bird species like the white ibis, great blue heron, and wood stork depend on Florida's Big Cypress Swamp. The last potential domain of the ivory-billed woodpecker and the endangered Texas red wolf survive in the Texas Big Thicket. Hundreds of thousands of migratory waterfowl and song-birds feed and rest in swamps.

Nutrient-rich swamps are more than just havens for wildlife. They serve as a kind of natural flood-control system to absorb excess rains and provide free sewage treatment by cleansing polluted water thru natural filtration. One biologist credits American swamps with doing \$142 billion worth of pollution removal.

Author Thomas provides thumbnail sketches of more than 20 major swamps in the United States. His superb color photographs reveal their diverse moods and beauty.

Many photographs show details of swamp life that the casual visitor might overlook: an alligator egg hatching, a great blue heron stalking and catching fish, a bobcat peering from a treetop.

Having proven how fascinating

swamps can be, Thomas advises potential swamp watchers, "Wherever you live, chances are good there's a swamp, marsh, bog, or slough nearby. It may be small and at first glance seem insignificant. But there's plenty to see if you know how to look." Just sit perfectly still, make no noise, move only your eyes, and the swamp will come to life within minutes.

"Once when sitting on the edge of a swamp against a tree, I heard something running toward me in the woods," recalls Thomas. "Soon it was within

close range—an adult red fox. It easily loped along until it came to within ten feet of me. Suddenly it stopped, stared at me, licked its chops, twitched its ears, then circled cautiously a few feet, stopped again facing me, and then circled again a few feet . . . It lay down, scratched . . . then, as though bored . . . continued on its way."

The next best thing to seeing swamps firsthand is to do so through the pages of *The Swamp*.

By Sabin Robbins
FONZ, Executive Director

A coot feeding on water grasses in Illinois' LaRue Swamp testifies to the vital role that swamps play in supporting wildlife, as documented in a new book, *The Swamp*.



Charles Darwin

by John Chancellor. Taplinger Publishing Company, New York N.Y., 1976. 231 pages. Illustrated. \$13.95.

By following the life of Charles Darwin the man—son, grandson, husband and father—British author John Chancellor sheds new light on Darwin the reluctant revolutionary, author of *On The Origin of Species*, *The Descent of Man*, and other works.

Evolution was in the air when Darwin was born in 1809. His grandfather, Erasmus Darwin, had himself written a book foreshadowing the theories Lamarck was to propound fifteen years later. Grandson Charles, however, had no visible ambition as a young man. In fact, he was well on his way to becoming what his father feared most, “. . . an idle sportsman.” But on the strength of some amateur beetle collecting and an intense interest in geology, Darwin was recommended for the post of unpaid naturalist on board HMS *Beagle* in 1831.

In essence, Darwin's ultimate success as a scientist seems to have depended more on a series of fortuitous encounters than on his interest in natural history.

“The voyage of the *Beagle* has been by far the most important event in my life, and has determined my whole career.”

Although much has been said of Darwin's lack of formal education, Chancellor suggests that this may have been a boon. “He asked simple, basic, naive questions about life. They were questions which experts would not presume to ask, let alone to answer. Darwin did both.”

Darwin did more than ask questions. His years on the *Beagle* had turned him from an aimless young man into a patient, disciplined scientist. He tested, experimented, observed, and explored. Before writing *On The Origin of Species*, he spent eight years studying barnacles and published what became the standard reference work on the subject. He later referred to this eight-year study as the period of his most thorough training in biology.

The publication of *On The Origin of Species* in 1859 loosed a storm of controversy that hasn't yet entirely dissipated. Although Darwin carefully avoided the subject of man's origins in this work (the word “evolution” does not even appear), sensationalism and misunderstanding beclouded the issue. The book was considered a

challenge to the literal interpretation of the Bible. Its impact on Protestantism was so great that more than a century later it was still illegal to teach the theory of evolution in some parts of the United States.

As for Darwin, he apparently endured this sudden notoriety with his customary serenity. He ignored the battle raging around him and concentrated on studying plants.

Chancellor recognizes that others found their way independently to the same conclusions about the mutability of species. But it was the patient “amateur,” Darwin, working with methods and tools that were primitive, even by the standards of the day, who undertook the long years of experimentation and testing, and who saw for himself the finches of the Galapagos and the fossils on the beaches of the Argentine.

By Lee Glassco
FONZ House Guide

FONZ Spring Calendar 1977

April 16 & 17 New York Weekend

Discover the wildlife of New York City on a curator-conducted tour of the great Bronx Zoo. Visit great museums and overnight at the deluxe Americana Hotel near Times Square. The \$70 cost includes transportation, Zoo lunch, accomodations, and picnic supper on the return trip home.

April 24 Treasure Hunt

Hunt for answers in the Zoo for family teams. 10 a.m. to noon. See story page 20 for details.

May 7 & 8, 13—15 Audubon Nature Forays

See story on page 22 for details.

May 15 Treasure Hunt

Hunt for answers in the Zoo for adult teams of two. 10 a.m. to noon. See story on page 20 for details.

June 10 and 24 ZooNight

See next ZooGoer for details.

July 15—26, 1977 Galapagos Islands

This 12-day adventure tours the capital cities of Bogota, Colombia and Quito, Ecuador and climaxes with a five-day cruise to explore the remarkable Galapagos Islands. You'll swim with sea lions, visit a giant tortoise breeding station, and meet close-up dragon-like iguanas, penguins, booby birds, and flightless cormorants. Optional, post-tour excursions include Machu Picchu, "the lost city of the Incas," and a jungle cruise down the Amazon. The cost is approximately \$1500.

October 7—28, 1977 South Pacific—Australia—New Zealand

Some of the world's most fascinating wildlife—from duck-billed platypuses to albino kangaroos—star in this three-week look at the "down under" continent. Six days will be spent in New Zealand to see kiwis and a glow worm grotto plus several days basking on the paradise islands of Fiji and Tahiti. The cost is approximately \$2700.

FONZ NEWS

Treasure Hunt

What is the difference between an African and an Indian rhinoceros? Who is Femelle? How many Dorcas gazelles are in the Zoo?

Questions such as these will be part of an upcoming Treasure Hunt for FONZ members. The special event is free, and prizes go to the winners.

The Treasure Hunt is designed to give members a few hours of fun while learning about some of the Zoo animals. Answers to the questions will be found by looking carefully at the appropriate animal exhibits. The Hunt will be restricted to the upper half of the Zoo, and will take two hours.

The Treasure Hunt for family member teams (which should have at least one parent and one child between the ages of three and 16) is on Sunday, April 24; the Hunt for adult teams is scheduled for Sunday, May 15.

All treasure hunters will meet at 10 a.m. in the auditorium of the new Administration-Education Building at Connecticut Avenue. Closest parking is next to and

across from the Elephant House. Participants should bring their own pen or pencil and wear comfortable walking shoes.

Why does a polar bear put snow on its nose? Come to the Treasure Hunt and find out!

Reservations are required. Please call 232-7700.

The Ultimate Safari

Months ago FONZ decided to plan The Ultimate Safari for members who wanted a truly exceptional wildlife experience. Safari experts were queried about the perfect place, the perfect time, the perfect itinerary. The outcome is a remarkable, three-week, three-continent safari adventure to Botswana, a Texas-size independent nation between Rhodesia and South Africa.

Only 19 FONZ members can be accommodated. The group will leave Washington on September 10, 1977, and return on October 1. Although most of the time will be on safari in Botswana, several days will be spent in Brazil and South Africa on the way over and several days in Zambia and London on the return trip.

According to wildlife experts, "Botswana is the wildest safari territory in Africa . . . unspoiled, away from the beaten tracks and tourist crowds . . . a naturalist's paradise and a photographer's dream . . . the only people around are Bushmen hunting for food with bow and arrows."

Travel within Botswana to the finest game-viewing areas will be by private, twin-engine aircraft to remote areas that would take days of driving. On land, wardens and game rangers will take the group in roofless four-wheel-drive vehicles to explore roadless areas. Game-filled jungle rivers will be explored by comfortable boats and canoes.

The variety and numbers of game at the viewing areas the group will visit are at their peak in September. Elephant herds can be seen by the hundreds; zebra, wildebeest, kudu, sable antelopes, and hippos, by the thousands. Seeing many of the 460 species of birds identified in Botswana will delight group members, too. One can fish for fighting tigerfish, barbel, and breem, visit Stone Age tribesmen, or follow armed guides on walking safaris.

Although Botswana has been described as being like East

Africa of 200 years ago, the lodges and camps, which overlook scenic rivers, provide 20th-century comforts.

Stopovers on the way to Botswana will include two days in Rio de Janeiro overlooking Copacabana Beach with visits to Corcovado and Tejuca Forest, plus a special Brazilian barbecue with music and dances.

Another two days will be spent in South Africa to see Johannesburg, Pretoria, native villages, and lunch with the staff of the National Zoo there.

After nearly two weeks on safari through Botswana, the group will circle over Victoria Falls by chartered plane, enjoy a sun-downer cruise on the Zambesi River, and tour Livingstone, Zambia. The group will then fly to London for two days before returning by 747 jumbo jet on October 1 to Washington.

The tour price of about \$2,950 includes a \$100 tax-deductible contribution to FONZ .

A wildlife expert, guides, and the Executive Director of FONZ will assist the group throughout. For further information, contact the Office of the Executive Director, 232-7700.



FONZ Executive Director, Sabin Robbins, welcomes Wild Kingdom's Marlin Perkins and his wife, Carol, at a recent reception in their honor at the Monkey House. Some 400 FONZ members attended the benefit buffet.

Nature Forays

FONZ members are invited to join special Audubon tours to explore the diverse natural habitats of the mid-Atlantic regions. Experienced naturalists will lead the groups during the peak of bird migration and wild-flower blooming.

Tours range from day-long hiking trips to weekend excursions to Chincoteague Island and West Virginia. There is even a two-week Wild America tour. Prices start at \$3.

FONZ participants receive Audubon member discount rates. For details and registration forms call 652-9188.

FONZ ACTIVITY REGISTRATION FORM

Name: _____

Daytime Phone: _____

Address: _____

Zip Code

Title of Activity	Number Attending	Price Per Person

Mail registration form with check to:
FONZ
c/o National Zoo
Washington, DC 20009

TOTAL ENCLOSED _____
MAKE CHECKS PAYABLE TO FONZ

ATT: Membership

So that we may offer activities you would enjoy, please use the space below to list places you would like to visit and things you would like to do:

_____ nature walks; _____ camping; _____ hiking; _____ other (list below)

